

Address: DOT Technology and Innovation Newsletter



Back

Forward

Home

Reload

Images

Open

Print

Find

Stop

ONE DOT Technology Sharing

SBIR

TRB IDEA Program

CRADA Opportunities

DOT Patents

Partnerships

Summer 2000

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DOT Technology and Innovation Newsletter

This ONE DOT newsletter provides a look at innovation and technology across the different modes and organizations of the U.S. Department of Transportation. Its mission is to promote cross-fertilization and synergy within the Department and to reach out to other federal, state, local, and international transportation-related agencies, industry, and academia. It will be published on a quarterly basis by the U.S. DOT Technology Innovation Committee.

SOCP - A Program for Industry, Government and Labor to Promote Safe and Efficient Shipboard Operations



At the February meeting of the Ship Operations Cooperative Program (SOCP) in Texas, an announcement was made of a new partnership agreement with Videotel of the UK to produce three shipboard safety training videos -- Rigging Safety, Hot Work, and Lockout/Tagout. The agreement provides for all SOCP members to receive copies for all of their vessels and facilities. These three videos are the latest in a series of videos produced by SOCP addressing SCTW (Standards for Certification, Training, and Watchkeeping) training requirements as well as other subjects where there is an unmet need.

The meeting agenda also included a panel discussion of labor and shipping company officials on the subject of the severe shortage of both licensed and unlicensed mariners that is currently being experienced across the industry. The Cooperative intends to send a letter describing the issue, along with recommended actions, to senior personnel in government agencies, the shipping industry, and shipboard labor unions to bring this important issue into focus.

SOCP began in 1993 with only five members and, with the help of the Maritime Administration, it has rapidly expanded to a membership of 34. The cost-shared organization is perhaps the ideal way to partner with industry to solve common problems and to develop products to satisfy the common needs of its members.

The nominal \$5,000 annual membership fee gives the consortium the strength of an organization in making recommendations to state, federal, and international regulatory bodies as well as allowing the exploration of new technologies using the combined resources of private industry, labor, and government working together. For more information, please visit: <http://www.socp.org>.

research

CRDA Results in Successful De-icing Technology

On February 15, 2000 Process Technologies Inc. (PTI), now known as Radiant Energy Corp, officially opened an infrared deicing facility for Continental Airlines at Newark International Airport. This facility is large enough to deice the Continental fleet up to and including a Boeing 757. This achievement was the culmination of an effort that began in 1994 when the FAA's William J. Hughes Technical Center (Tech Center) built a partnership with a small Buffalo, NY firm that had an idea which went against conventional wisdom. PTI had a total of three people, a hand-held contraption that melted ice cubes in a Buffalo garage, and an enormous amount of enthusiasm and perseverance.

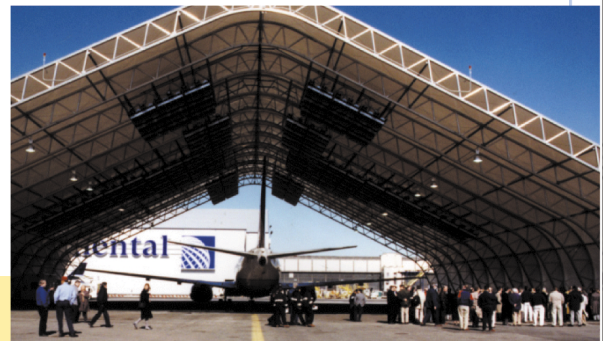
The technology behind this innovative system is as old as the sun itself. It uses infrared energy to warm an object in the same manner as the sun warming your skin on a cold winter day. Specially designed burners heat pipes to a point at which they emit infrared energy "tuned" to the absorption range of ice. This energy behaves like a beam of light except that it warms rather than illuminates objects in its path.

The FAA's Technology Transfer Team, Jennelle Derrickson, Marie Denan, and Pete Sparacino, put together a Cooperative Research and Development Agreement (CRDA) with PTI in 1994. This CRDA gave the Tech Center's Jim White the opportunity to comb the Center for people and resources to fuse with the industrial know-how and fiscal resources gathered by PTI.

Over the next three winters the Tech Center's Armando Gaetano, and test pilots Mark Ehrhart and Keith Biehl provided a mix of FAA test aircraft for a series of deicing demonstrations. Jim, Armando, and the pilots worked many frigid nights in Buffalo and Rochester, NY with the PTI crews as they demonstrated to the aviation community the effectiveness of their deicing system. Every step of the way the imaging specialists from ACT-073 captured the events on film and videotape.

The Newark facility is the third infrared system to go on-line. Buffalo was chosen for the installation of the first system (1997) followed by Rhinelander, Wisconsin (1998). These facilities are sized for business and commuter airplanes. With Newark, infrared deicing has moved up to the big leagues. But all three provide a chemical-free method for deicing aircraft.

Although the CRDA with PTI is history, the dividends continue. And there is one more FAA chapter to this story. George Legarreta of the Tech Center is preparing the Advisory Circular language that will make systems like the one at Newark eligible for federal support. Airports across the country (and the world for that matter) now have another way to keep winter flight safe for both the passenger and the environment.



*Boeing 757 inside Newark infrared deicing facility
Photo credit to Bill Dawson.*

technology

SBIR Program 2000 Utilizes E-Commerce

The Small Business Innovation Research (SBIR) program seeks to encourage the initiative of the private sector and to use small business as effectively as possible in meeting federal research and development objectives. DOT, on an annual basis, solicits small businesses to submit innovative research proposals that address high priority requirements of the department and have the potential for commercialization.

On February 15, the DOT SBIR 2000 Program Solicitation was posted on the web site, <http://www.volpe.dot.gov/sbir>. There were 24 research topics with 15 funded by FHWA, 4 by FTA, 3 by NHTSA, and 2 by USCG. The deadline for the proposals was May 1 and for the first time, these proposals were accepted electronically. Phase I awards will be in October and may be funded up to \$100,000 for a period of performance up to 6 months.

Phase I awardees will be eligible to participate in Phase II based on the results of Phase I efforts, technical merit, agency priority, potential for commercial applications, and the availability of appropriated funds to support the Phase II effort. Special consideration may be given to proposals that have obtained commitments for follow-on funding from non-Federal sources for Phase III. Phase II is the principal research effort; the period of performance may last up to two years and may have a dollar value of \$750,000. Phase III may also involve follow-on non-SBIR funded contracts with components of DOT for products or processes for use by the government. To find out more about SBIR, please consult the website. In future issues, we will feature SBIR success stories.

“Creating a climate of innovation is, by definition, an ongoing effort - a journey whose rewards will be the improvements made along the way.”

Transportation Secretary Rodney E. Slater
Transportation Research Board Annual Meeting
January 10, 2000

TRB IDEA PROGRAM

The IDEA (Innovations Deserving Exploratory Analysis) Program explores the feasibility of unproven technical concepts or novel applications of proven concepts with the potential to advance surface transportation systems. It differs from the SBIR program in that the offeror is not restricted to a particular topic. Good ideas that support goals of safe and efficient transportation are eligible. Another major difference is that proposals are welcomed from anyone at any time. Concept Exploration Projects may receive between \$25,000 - \$100,000; cost-sharing is recommended. Product Application Projects may receive between \$50,000 - \$100,000; cost sharing is required.

There are four separate but integrated IDEA programs: Transit IDEA (FTA's Transit Cooperative Research Program), Highway IDEA (National Cooperative Highway Research Program/FHWA, State Agencies in cooperation with AASHTO), ITS IDEA (FHWA, NHTSA, FRA) and HSR (High Speed Rail) IDEA (FRA). For more information, please visit:

<http://www4.nationalacademies.org/trb/dive-idea.nsf>

programs

CALENDAR

June 6-9	Air Traffic Control Association (ATCA) International Technical Conference, Vancouver, Canada	September 24-28	American Public Transportation Association (APTA), San Francisco, California
June 26-28	IAIN/Institute of Navigation (ION) Annual Meeting, San Diego, California	October 9-12	International Transportation Conference (USDOT) "Facilitating the Expansion of International Trade and Commerce into the 21st Century," Washington, DC
July 19-20	National Intelligent Vehicle Initiative (IVI) Meeting, Washington, DC	October 31-November 2	Technology 2000 National SBIR Fall Conference, Seattle, Washington
July 20-22	Technology Transfer Society (T ₂) National Meeting, Austin, Texas		
August 14-17	Civil Engineering Research Foundation (CERF) International Symposium, Washington, DC		

For details, please visit: <http://scitech.dot.gov>

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